

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for indexing documents in a collection of documents using skip entries, each document comprising one or more index terms, the method comprising:

determining a first value x representative of a first location for inserting a first skip entry in an inverted index, such that x is determined as an integer corresponding to a quantity of documents including at least a majority of the index terms, wherein the first value x representing the first location for inserting the first skip entry is not the first posting of the inverted index;

determining a second value y, where y does not exceed x, the second value y determined as an integer and representative of a second location for inserting a second skip entry in the inverted index, wherein y does not equal x, such that the first and second skip entries are provided at different intervals;

generating the inverted index for the collection of documents, the inverted index including an inverted list for each of the index terms, each inverted list including at least one posting and, if the number of postings exceeds x, further including the first skip entry inserted after the x^{th} posting and one or more second skip entries inserted thereafter at intervals of every y^{th} posting;

wherein:

the at least one posting includes a document identifier identifying a document in the collection of documents;

the first and second skip entries including a document identifier that is included in a boundary posting of a block of postings immediately adjacent to the skip entry in the inverted list, where a block of postings includes postings having document identifiers ranging from a lower to an upper value and where a boundary posting is a posting having a document identifier of either the lower or the upper value.

2. (Previously Presented) The method of claim 1, wherein each posting further includes a position identifier identifying a position of the index term in the document, and a frequency of the index term occurring in the document.

3. (Previously Presented) The method of claim 1, wherein the boundary posting includes a document identifier having the lower value in the range of values and the block of postings follow the first skip entry in the inverted list.

4. (Previously Presented) The method of claim 3, wherein the first skip entry further includes information to locate the next skip entry in the inverted list.

5. (Previously Presented) The method of claim 1, wherein the boundary posting includes a document identifier having the higher value in the range of values and the block of postings precede the first skip entry in the inverted list.

6. (Previously Presented) The method of claim 5, wherein the first skip entry further includes information to locate the next skip entry in the inverted list.

7. (Canceled)

8. (Previously Presented) The method of claim 1, wherein x is selected from a first range of 256 to 512 and y is selected from a second range of 128 to 256, wherein y is not selected to have the same value as x.

9. (Original) The method of claim 1, wherein the collection of one or more documents includes one or more binary files, data tables, source code files, text documents or combinations thereof.

10. (Original) The method of claim 1, further comprising:
compressing the inverted index.

11. (Original) The method of claim 1, wherein substantially all of the index terms occur in x documents or fewer.

12. (Previously Presented) The method of claim 11, wherein at least approximately 80% of the index terms occur in x documents.

13. (Original) The method of claim 1, wherein for each inverted list, if the number of postings exceeds x, further including a skip entry before the first posting in the inverted list.

14. (Original) The method of claim 1, wherein for each inverted list, if the number of postings exceeds x, further including a skip entry after the last posting in the inverted list.

15. (Currently Amended) A method for indexing documents using skip entries, the method comprising:

receiving a collection of documents, each document comprising one or more index terms;

determining a first value x representative of a first location for inserting a first skip entry in an inverted index, wherein at least a majority of the index terms occur within x documents and

x is an integer in a first range of 256 to 512, wherein the first value x representing the first location for inserting the first skip entry is not the first posting of the inverted index;

determining a second value y representative of a second location for inserting a second skip entry in the inverted index, wherein y does not exceed the value x and is an integer in a second range of 128 to 256, wherein y does not equal x, such that the first and second skip entries are provided at different intervals; and

generating the inverted index for the collection of documents, the inverted index including an inverted list for each of the index terms, each inverted list including at least one posting and, if the number of postings exceeds x, further including the first skip entry inserted after the xth, posting and one or more second skip entries inserted thereafter at intervals of every yth posting;

wherein:

the at least one posting includes a document identifier identifying a document in the collection of documents;

the first and second skip entries include a document identifier that is included in a boundary posting of a block of postings immediately adjacent to the skip entry in the inverted list, where a block of postings includes postings having document identifiers ranging from a lower to an upper value and where a boundary posting is a posting having a document identifier of either the lower or the upper value.

16. (Previously Presented) The method of claim 15, wherein each posting further includes a position identifier identifying a position of the index term in the document, and a frequency of the index term occurring in the document.

17. (Previously Presented) The method of claim 15, wherein the boundary posting includes a document identifier having the lower value in the range of values

and the block of postings follows the first skip entry in the inverted list.

18. (Previously Presented) The method of claim 17, wherein the first skip entry further includes information to locate the next skip entry in the inverted list.

19. (Previously Presented) The method of claim 15, wherein the boundary posting includes a document identifier having the higher value in the range of values and the block of postings precede the first skip entry in the inverted list.

20. (Previously Presented) The method claim 15, wherein the first skip entry further includes information to locate the next skip entry in the inverted list.

21. (Original) The method of claim 15, wherein substantially all of the index terms occur in x documents or fewer.

22. (Original) The method of claim 21, wherein approximately 80 to 90% of the index terms occur in x documents or fewer.

23. (Original) The method of claim 15, wherein for each inverted list, if the number of postings exceeds x, further including a skip entry before the first posting in the inverted list.

24. (Original) The method of claim 15, wherein for each inverted list, if the number of postings exceeds x, further including a skip entry after the last posting in the inverted list.

Claims 25-36 canceled.

37. (Currently Amended) An article comprising a machine-readable medium storing instructions operable to cause one or more machines to perform operations comprising:
determining a first value x representative of a first location for inserting a first skip entry in an inverted index, such that x is determined as an integer corresponding to a quantity of documents including at least a majority of the index terms, wherein the first value x representing the first location for inserting the first skip entry is not the first posting of the inverted index;

determining a second value y, where y does not exceed x, the second value y determined as an integer and representative of a second location for inserting a second skip entry in the inverted index;

generating the inverted index for the collection of documents, the inverted index including an inverted list for each of the index terms, each inverted list including at least one posting and, if the number of postings exceeds x, further including the first skip entry inserted after the x^{th} posting and one or more second skip entries inserted thereafter at intervals of every y^{th} posting, wherein y does not equal x, such that the first and second skip entries are provided at different intervals;

wherein:

the at least one posting includes a document identifier identifying a document in the collection of documents;

the first and second skip entries including a document identifier that is included in a boundary posting of a block of postings immediately adjacent to the skip entry in the inverted list, where a block of postings includes postings having document identifiers ranging from a lower to an upper value and where a boundary posting is a posting having a document identifier of either the lower or the upper value.

38. (Previously Presented) The article of claim 37, wherein each posting further includes a position identifier identifying a position of the index term in the document, and a frequency of the index term occurring in the document.

39. (Previously Presented) The article of claim 37, wherein the boundary posting includes a document identifier having the lower value in the range of values and the block of postings follow the first skip entry in the inverted list.

40. (Previously Presented) The article of claim 39, wherein the first skip

entry further includes information to locate the next skip entry in the inverted list.

41. (Previously Presented) The article of claim 37, wherein the boundary posting includes a document identifier having the higher value in the range of values and the block of postings precede the first skip entry in the inverted list.

42. (Previously Presented) The article of claim 41, wherein the first skip entry further includes information to locate the next skip entry in the inverted list.

43. (Canceled).

44. (Previously Presented) The article of claim 37, wherein x is selected from a first range of 256 to 512 and y selected from a second range of 128 to 256, wherein y is not selected to have the same value as x.

45. (Original) The article of claim 37, wherein the collection of one or more documents includes one or more binary files, data tables, source code files, text documents or combinations thereof.

46. (Original) The article of claim 37, further comprising instructions operable to cause one or more machines to perform operations comprising: compressing the inverted index.

47. (Original) The article of claim 37, wherein substantially all of the index terms occur in x documents or fewer.

48. (Previously Presented) The article of claim 47, wherein at least approximately 80% of the index terms occur in x documents.

49. (Original) The article of claim 37, wherein for each inverted list, if the number of postings exceeds x, further including a skip entry before the first posting in the inverted list.

50. (Original) The article of claim 37, wherein for each inverted list, if the number of postings exceeds x, further including a skip entry after the last posting in the inverted

list.

51. (Currently Amended) An article comprising a machine-readable medium storing instructions operable to cause one or more machines to perform operations comprising:
receiving a collection of documents, each document comprising one or more index terms;

determining a first value x representative for inserting a first location of a first skip entry in an inverted index, wherein at least a majority of the index terms occur within x documents and x is an integer in a first range of 256 to 512, wherein the first value x representing the first location for inserting the first skip entry is not the first posting of the inverted index;

determining a second value y representative for inserting a second location of a second skip entry in the inverted index, wherein y does not exceed the value x and is an integer in a second range of 128 to 256; and

generating the inverted index for the collection of documents, the inverted index including an inverted list for each of the index terms, each inverted list including at least one posting and, if the number of postings exceeds x, further including the first skip entry inserted after the xth posting and one or more second skip entries inserted thereafter at intervals of every yth posting, wherein y does not equal x, such that the first and second skip entries are provided at different intervals;

wherein:

the at least one posting includes a document identifier identifying a document in the collection of documents;

the first and second skip entries include a document identifier that is included in a boundary posting of a block of postings immediately adjacent to the skip entry in the inverted list, where a block of postings includes postings having document identifiers ranging from a

lower to an upper value and where a boundary posting is a posting having a document identifier of either the lower or the upper value.

52. (Previously Presented) The article of claim 51, wherein each posting further includes a position identifier identifying a position of the index term in the document, and a frequency of the index term occurring in the document.

53. (Previously Presented) The article of claim 51, wherein the boundary posting includes a document identifier having the lower value in the range of values and the block of postings follow the first skip entry in the inverted list.

54. (Previously Presented) The article of claim 53, wherein the first skip entry further includes information to locate the next skip entry in the inverted list.

55. (Previously Presented) The article of claim 51, wherein the boundary posting includes a document identifier having the higher value in the range of values and the block of postings precede the first skip entry in the inverted list.

56. (Previously Presented) The article of claim 51, wherein the first skip entry further includes information to locate the next skip entry in the inverted list.

57. (Original) The article of claim 51, wherein substantially all of the index terms occur in x documents or fewer.

58. (Original) The article of claim 57, wherein approximately 80 to 90% of the index terms occur in x documents or fewer.

59. (Original) The article of claim 51, wherein for each inverted list, if the number of postings exceeds x, further including a skip entry before the first posting in the inverted list.

60. (Original) The article of claim 51, wherein for each inverted list, if the number of postings exceeds x, further including a skip entry after the last posting in the inverted list.